Jiangyan Wang

List of Publications by Year
in descending order

67 papers	9,084 citations	61984 43 h-index	91884 69 g-index
69 all docs	69 docs citations	69 times ranked	9413 citing authors

#	Article	IF	Citations
1	Ultrathin, flexible, solid polymer composite electrolyte enabled with aligned nanoporous host for lithium batteries. Nature Nanotechnology, 2019, 14, 705-711.	31.5	773
2	Accurate Control of Multishelled Co₃O₄ Hollow Microspheres as Highâ€Performance Anode Materials in Lithiumâ€Ion Batteries. Angewandte Chemie - International Edition, 2013, 52, 6417-6420.	13.8	650
3	Multi-shelled hollow micro-/nanostructures. Chemical Society Reviews, 2015, 44, 6749-6773.	38.1	603
4	Multishelled TiO₂ Hollow Microspheres as Anodes with Superior Reversible Capacity for Lithium Ion Batteries. Nano Letters, 2014, 14, 6679-6684.	9.1	406
5	Air-stable and freestanding lithium alloy/graphene foil as an alternative to lithium metal anodes. Nature Nanotechnology, 2017, 12, 993-999.	31.5	376
6	Multi-shelled metal oxides prepared via an anion-adsorption mechanism for lithium-ion batteries. Nature Energy, 2016, 1, .	39.5	352
7	Improving cyclability of Li metal batteries at elevated temperatures and its origin revealed by cryo-electron microscopy. Nature Energy, 2019, 4, 664-670.	39.5	336
8	Uniform High Ionic Conducting Lithium Sulfide Protection Layer for Stable Lithium Metal Anode. Advanced Energy Materials, 2019, 9, 1900858.	19.5	333
9	A manganeseâ€“hydrogen battery with potential for grid-scale energy storage. Nature Energy, 2018, 3, 428-435.	39.5	325
10	Design of Hollow Nanostructures for Energy Storage, Conversion and Production. Advanced Materials, 2019, 31, e1801993.	21.0	313
11	Accurate Control of Multishelled Co₃O₄ Hollow Microspheres as Highâ€Performance Anode Materials in Lithiumâ€Ion Batteries. Angewandte Chemie, 2013, 125, 6545-6548.	2.0	290
12	Quintupleâ€Shelled SnO₂ Hollow Microspheres with Superior Light Scattering for Highâ€Performance Dyeâ€Sensitized Solar Cells. Advanced Materials, 2014, 26, 905-909.	21.0	283
13	A binder-free high silicon content flexible anode for Li-ion batteries. Energy and Environmental Science, 2020, 13, 848-858.	30.8	245
14	Constructing SrTiO₃â€“TiO₂ Heterogeneous Hollow Multiâ€shelled Structures for Enhanced Solar Water Splitting. Angewandte Chemie - International Edition, 2019, 58, 1422-1426.	13.8	212
15	Free-standing ultrathin lithium metalâ€“graphene oxide host foils with controllable thickness for lithium batteries. Nature Energy, 2021, 6, 790-798.	39.5	198
16	Multi-shelled hollow micro-/nanostructures: promising platforms for lithium-ion batteries. Materials Chemistry Frontiers, 2017, 1, 414-430.	5.9	189
17	Temperatureâ€Dependent Nucleation and Growth of Dendriteâ€Free Lithium Metal Anodes. Angewandte Chemie - International Edition, 2019, 58, 11364-11368.	13.8	182
18	Hollow Multishelled Structures for Promising Applications: Understanding the Structureâ€“Performance Correlation. Accounts of Chemical Research, 2019, 52, 2169-2178.	15.6	160

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19	pHâ€Regulated Synthesis of Multiâ€Shelled Manganese Oxide Hollow Microspheres as Supercapacitor Electrodes Using Carbonaceous Microspheres as Templates. Advanced Science, 2014, 1, 1400011.	11.2	154
20	Engineering stable interfaces for three-dimensional lithium metal anodes. Science Advances, 2018, 4, eaat5168.	10.3	153
21	Sequential Templating Approach: A Groundbreaking Strategy to Create Hollow Multishelled Structures. Advanced Materials, 2019, 31, e1802874.	21.0	153
22	Hollow Multiâ€Shelled Structural TiO_{2â^’x} with Multiple Spatial Confinement for Longâ€Life Lithiumâ€“Sulfur Batteries. Angewandte Chemie - International Edition, 2019, 58, 9078-9082.	13.8	149
23	Hollow multishell structures exercise temporalâ€“spatial ordering and dynamic smart behaviour. Nature Reviews Chemistry, 2020, 4, 159-168.	30.2	147
24	Engineering of multi-shelled SnO₂ hollow microspheres for highly stable lithium-ion batteries. Journal of Materials Chemistry A, 2016, 4, 17673-17677.	10.3	127
25	Shell-Protective Secondary Silicon Nanostructures as Pressure-Resistant High-Volumetric-Capacity Anodes for Lithium-Ion Batteries. Nano Letters, 2018, 18, 7060-7065.	9.1	121
26	Membraneâ€Free Zn/MnO₂ Flow Battery for Largeâ€Scale Energy Storage. Advanced Energy Materials, 2020, 10, 1902085.	19.5	111
27	V₂O₅ Textile Cathodes with High Capacity and Stability for Flexible Lithiumâ€Ion Batteries. Advanced Materials, 2020, 32, e1906205.	21.0	107
28	Hollow Multiâ€Shelled Structure with Metalâ€“Organicâ€Frameworkâ€Derived Coatings for Enhanced Lithium Storage. Angewandte Chemie - International Edition, 2019, 58, 5266-5271.	13.8	102
29	Construction of Multishelled Binary Metal Oxides via Coabsorption of Positive and Negative Ions as a Superior Cathode for Sodium-Ion Batteries. Journal of the American Chemical Society, 2018, 140, 17114-17119.	13.7	96
30	Multi-shelled LiMn₂O₄ hollow microspheres as superior cathode materials for lithium-ion batteries. Inorganic Chemistry Frontiers, 2016, 3, 365-369.	6.0	84
31	Dualâ€Defects Adjusted Crystalâ€Field Splitting of LaCo_{1â^’x}Ni_xO_{3â^’Î´}Hollow Multishelled Structures for Efficient Oxygen Evolution. Angewandte Chemie - International Edition, 2020, 59, 19691-19695.	13.8	80
32	Temperatureâ€Dependent Nucleation and Growth of Dendriteâ€Free Lithium Metal Anodes. Angewandte Chemie, 2019, 131, 11486-11490.	2.0	72
33	Hollow Micro-/Nanostructure Reviving Lithium-sulfur Batteries. Chemical Research in Chinese Universities, 2020, 36, 313-319.	2.6	70
34	Highly Efficient Photothermal Conversion and Water Transport during Solar Evaporation Enabled by Amorphous Hollow Multishelled Nanocomposites. Advanced Materials, 2022, 34, e2107400.	21.0	68
35	Scalable synthesis of nanoporous silicon microparticles for highly cyclable lithium-ion batteries. Nano Research, 2020, 13, 1558-1563.	10.4	65
36	Electrocatalytic Nâ€Doped Graphitic Nanofiber â€“ Metal/Metal Oxide Nanoparticle Composites. Small, 2018, 14, e1703459.	10.0	61

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37	Improving Lithium Metal Composite Anodes with Seeding and Pillaring Effects of Silicon Nanoparticles. ACS Nano, 2020, 14, 4601-4608.	14.6	61
38	Synthesis of multi-shelled MnO₂ hollow microspheres via an anion-adsorption process of hydrothermal intensification. Inorganic Chemistry Frontiers, 2016, 3, 1065-1070.	6.0	60
39	Microclusters of Kinked Silicon Nanowires Synthesized by a Recyclable Iodide Process for Highâ€Performance Lithiumâ€Ion Battery Anodes. Advanced Energy Materials, 2020, 10, 2002108.	19.5	57
40	Efficient sequential harvesting of solar light by heterogeneous hollow shells with hierarchical pores. National Science Review, 2020, 7, 1638-1646.	9.5	57
41	Controllable Synthesis of Hollow Multishell Structured Co3O4 with Improved Rate Performance and Cyclic Stability for Supercapacitors. Chemical Research in Chinese Universities, 2020, 36, 68-73.	2.6	53
42	Hollow Multiâ€Shelled Structural TiO_{2â^'x} with Multiple Spatial Confinement for Longâ€Life Lithiumâ€“Sulfur Batteries. Angewandte Chemie, 2019, 131, 9176-9180.	2.0	45
43	General Synthesis of Multipleâ€Cores@Multipleâ€Shells Hollow Composites and Their Application to Lithiumâ€Ion Batteries. Angewandte Chemie - International Edition, 2021, 60, 25719-25722.	13.8	44
44	Constructing SrTiO₃â€“TiO₂ Heterogeneous Hollow Multiâ€shelled Structures for Enhanced Solar Water Splitting. Angewandte Chemie, 2019, 131, 1436-1440.	2.0	42
45	Small Structures Bring Big Things: Performance Control of Hollow Multishelled Structures. Small Structures, 2021, 2, 2000041.	12.0	42
46	Hollow Multishelled Structured SrTiO₃ with La/Rh Coâ€Doping for Enhanced Photocatalytic Water Splitting under Visible Light. Small, 2021, 17, e2005345.	10.0	38
47	Accurately Localizing Multiple Nanoparticles in a Multishelled Matrix Through Shellâ€toâ€Core Evolution for Maximizing Energyâ€Storage Capability. Advanced Materials, 2022, 34, e2200206.	21.0	32
48	Hollow multishelled structures revive high energy density batteries. Nanoscale Horizons, 2020, 5, 1287-1292.	8.0	31
49	Incorporating the Nanoscale Encapsulation Concept from Liquid Electrolytes into Solid-State Lithiumâ€“Sulfur Batteries. Nano Letters, 2020, 20, 5496-5503.	9.1	30
50	The precise synthesis of twin-born Fe₃O₄/FeS/carbon nanosheets for high-rate lithium-ion batteries. Materials Chemistry Frontiers, 2021, 5, 4579-4588.	5.9	28
51	Electrolyte-Phobic Surface for the Next-Generation Nanostructured Battery Electrodes. Nano Letters, 2020, 20, 7455-7462.	9.1	25
52	Design and Construction of 3D Porous Na3V2(PO4)3/C as High Performance Cathode for Sodium Ion Batteries. Chemical Research in Chinese Universities, 2021, 37, 265-273.	2.6	25
53	Coating conductive polypyrrole layers on multiple shells of hierarchical SnO2 spheres and their enhanced cycling stability as lithium-ion battery anode. Applied Surface Science, 2022, 586, 152836.	6.1	21
54	Electrolytes for microsized silicon. Nature Energy, 2020, 5, 361-362.	39.5	19

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55	The development of hollow multishelled structure: from the innovation of synthetic method to the discovery of new characteristics. Science China Chemistry, 2022, 65, 7-19.	8.2	17
56	Progress and Perspectives of Hollow Multishelled Structures. Chinese Journal of Chemistry, 2022, 40, 1190-1203.	4.9	17
57	Hollow Multiâ€Shelled Structure with Metalâ€“Organicâ€Frameworkâ€Derived Coatings for Enhanced Lithium Storage. Angewandte Chemie, 2019, 131, 5320-5325.	2.0	15
58	Hollow multishelled structural NiO as a â€œshelterâ€•for high-performance Liâ€“S batteries. Materials Chemistry Frontiers, 2020, 4, 2971-2975.	5.9	14
59	A novel battery scheme: Coupling nanostructured phosphorus anodes with lithium sulfide cathodes. Nano Research, 2020, 13, 1383-1388.	10.4	13
60	Graphene coating on silicon anodes enabled by thermal surface modification for high-energy lithium-ion batteries. MRS Bulletin, 2022, 47, 127-133.	3.5	13
61	Decoding lithium batteries through advanced in situ characterization techniques. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 965-989.	4.9	11
62	Dualâ€Defects Adjusted Crystalâ€Field Splitting of LaCo_{1â^'x}Ni_xO_{3â^'Î´}Hollow Multishelled Structures for Efficient Oxygen Evolution. Angewandte Chemie, 2020, 132, 19859-19863.	2.0	5
63	General Synthesis of Multipleâ€Cores@Multipleâ€Shells Hollow Composites and Their Application to Lithiumâ€Ion Batteries. Angewandte Chemie, 2021, 133, 25923-25926.	2.0	3
64	Sequential Templating Approach: Sequential Templating Approach: A Groundbreaking Strategy to Create Hollow Multishelled Structures (Adv. Mater. 38/2019). Advanced Materials, 2019, 31, 1970274.	21.0	2
65	Cryo-EM Reveals the Structure and Chemistry of the Silicon Solid-Electrolyte Interphase. CheM, 2020, 6, 331-334.	11.7	2
66	Solar Water Splitting: Hollow Multishelled Structured SrTiO₃ with La/Rh Coâ€Doping for Enhanced Photocatalytic Water Splitting under Visible Light (Small 22/2021). Small, 2021, 17, 2170111.	10.0	2
67	Highly Efficient Photothermal Conversion and Water Transport during Solar Evaporation Enabled by Amorphous Hollow Multishelled Nanocomposites (Adv. Mater. 7/2022). Advanced Materials, 2022, 34, .	21.0	1